AMENDMENTS TO THE SPECIFICATION

1. Please replace paragraph [0015] with the following amended paragraph:

[0015] In one exemplary embodiment according to the present invention, a process is provided for calculating a meshed description of a realization of a reservoir. The realization comprises a plurality of stratigraphic surfaces. For example, this process includes provisions of:

(a) obtaining a reference realization of the reservoir, the reference realization comprising the stratigraphic surfaces;

(b) obtaining a meshed reference description for the reference realization, the reference description comprising a plurality of planes, at least some of the planes describing the stratigraphic surfaces, each of the planes comprising a plurality of points;

(c) obtaining at least two particular surfaces of the stratigraphic surfaces of the realization corresponding to two stratigraphic surfaces of the reference realization; ~~and~~

(d) for two homologous points of the plurality of points of two particular planes of the plurality of planes describing the two stratigraphic surfaces of the reference realization,

i. determining two points underlying the two homologous points on the two ~~particular~~ stratigraphic surfaces of the reference realization,

ii. calculating displacements of the two underlying points ~~in transit of~~ when the two stratigraphic surfaces of the reference realization ~~in transit of~~ are changed into the corresponding particular surfaces of the realization,

iii. selecting the displaced underlying points as two homologous points of the planes of the meshed description describing the particular surfaces of the realization, and

(e)~~iv.~~ determining planes of the meshed description by an interpolation between homologous points of the planes of the meshed description describing the particular surfaces of the realization.

2. Please replace paragraph [0021] with the following amended paragraph:

[0021] According to another exemplary embodiment of the present invention, a program, residing on a computer-readable medium, is provided for calculating a meshed description of a realization of a reservoir. The realization comprising a plurality of stratigraphic surfaces. This program includes:

(a) a first module which is configured to introduce:

i. a reference realization of the reservoir, the reference realization comprising the stratigraphic surfaces,

ii. a meshed reference description for the reference realization; the reference description comprising a plurality of planes, at least some of the planes describing the stratigraphic surfaces, each of the planes comprising a plurality of points,

iii. at least two particular surfaces of the stratigraphic surfaces of the realization corresponding to two stratigraphic surfaces of the reference realization;

(b) a second module which is configured to calculate, for two homologous points of the two planes describing the two stratigraphic surfaces of the reference realization,

i. two points underlying the two homologous points on the two stratigraphic surfaces of the reference realization,

ii. displacements of the two underlying points ~~in the transit of~~ when the two stratigraphic surfaces of the reference realization are changed into the two corresponding stratigraphic surfaces of the realization, and

iii. the two displaced underlying points being two homologous points of the two planes of the meshed description describing the two stratigraphic surfaces of the realization; and

(c) a third module which is configured to calculate planes of the meshed description by interpolation between the homologous points of these two planes.

3. Please replace paragraph [0053] with the following amended paragraph:

[0053] After proceeding through the loop for the entire set of pillars, the points $N^k_{g,h,1}$ and $N^k_{g,h,m}$ forming the planes G^k_1 and G^k_m standing on the top and bottom surfaces of the other realization have been defined. The deterioration is ~~based~~ made simply on the basis of

- the top and bottom surfaces S^0_1 and S^0_n of the reference realization,
- the planes G^0_1 and G^0_n standing on these surfaces and
- the top and bottom surfaces S^k_1 and S^k_n of the other realization,

the planes G^k_1 and G^k_m standing on the top and bottom surfaces of the other realization R^k.

4. Please replace paragraph [0085] with the following amended paragraph:

[0085] The process does not necessarily involve recalculating the entire meshed description for the new realization, but simply assumes knowledge of the homologous points of the surfaces inside a realization. It also assumes a displacement calculation, that is to say a homology ~~(linear scaling)~~ of the representation between the various realizations. This is simply ensured in the

examples proposed above if the realizations correspond to uncertainty samplings, or else if the realizations exhibit the same topology.